

DATA FOR DEVELOPMENT (D4D)

POLICY BRIEF

Promoting Data Culture in Pakistan

SAJID AMIN JAVED
AQSA NAVEED

The emergence of new technologies and innovative tools for data collection, data sharing, and data use can present an opportunity for any statistical system to develop a data and development ecosystem. Timely availability of and access to quality data in required formats and at right disaggregation level can play an important role in effective and efficient development planning, allowing relevant departments to track progress on priority policy agenda. Efficient use of reliable data can enhance transparency of policies, accountability of governments, and confidence of citizens in public institutions (Haidar and Kawass)

However, benefiting from the transformative potential of data—and moving towards “data driven planning” --- to improve governance, public service delivery, and people’s lives, requires a comprehensive data governance framework. This encompasses: i) robust data collection and dissemination systems, ii) access to data with no gateways, and iii) ability of stakeholders to use data. In other words, it requires a holistic data culture.

Data: nucleus of sustainable development

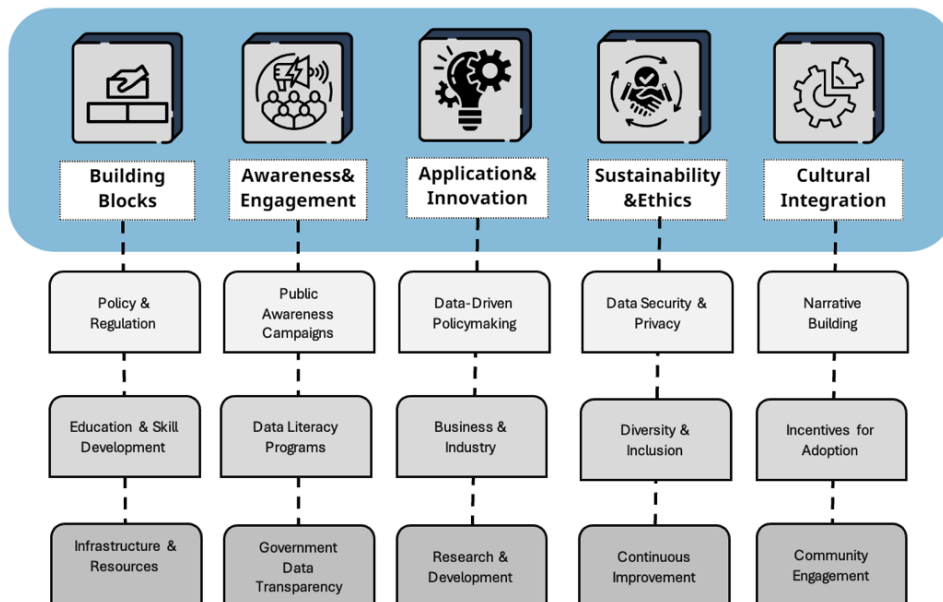
The emergence of new technologies and innovative tools for data collection, data sharing, and data use can present an opportunity for any statistical system to develop a data and development ecosystem. Timely availability of and access to quality data in required formats and at the right disaggregation level can play an important role in effective and efficient development planning, allowing relevant departments to track progress on priority policy agendas. Efficient use of reliable data can enhance transparency of policies, accountability of governments, and confidence of citizens in public institutions (Haidar and Kawass)¹.

However, benefiting from the transformative potential of data—and moving towards ‘data-driven planning’—to improve governance, public service delivery, and people’s lives, requires a comprehensive data governance framework. This encompasses robust data collection and dissemination systems; access to data with no gateways; and the ability of stakeholders to use data. In other words, it requires a holistic data culture.

Ecosystem for data culture

The ecosystem for promoting data culture is structured into five key areas: Building Blocks, Awareness & Engagement, Application & Innovation, Sustainability & Ethics, and Cultural Integration. Each area comprises specific components, such as policy and regulation, data literacy programmes, and data-driven policymaking, which work together to build a robust data culture. The model emphasises the integration of data practices across sectors, fostering an environment where data is leveraged for informed decision-making and societal benefits.

Figure 1: Ecosystem for Promoting Data Culture



Data culture goes beyond mere data collection and sharing. While data collection—to which data-centric discourse in Pakistan is largely limited—is undoubtedly a very important pillar of data culture, it is only the beginning. Extending beyond technical processes and procedures of collecting, disseminating and using data, data culture represents the collective behaviours and beliefs of people—

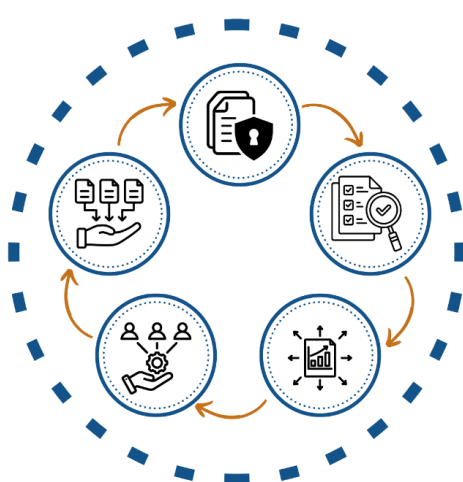
¹ <https://www.aub.edu.lb/osb/Documents/Policybrief.pdf>

data producers, data users, and policymakers—who value, practice, and encourage the use of data to improve decision-making.

Data access is core to data-driven planning and data culture

At the heart of data culture and evidence-based development planning is universal access to data, where data user groups have equitable access to quality data at the right time, and in required formats. To ensure universal access to data, the National Statistical System of Pakistan, both at the federal and provincial levels, must work on a three-pronged strategy: i) effective data governance; ii) improving data literacy, and iii) adopting easy to use technologies, such as data portals, to make data available to users without any gateway.

I. Data governance²



A robust data governance model drives data culture. It “establishes and makes accessible the set of norms and standards associated with data. Agreed-upon data governance norms will provide clarity and assurance in the way data is overseen and managed, and will support data availability, quality, security, usability, and integrity”³. A well-defined data governance framework involves the following components:

- Well-established data collection framework
- Globally aligned data quality standards
- Established data security systems
- Clearly defined data coordination mechanisms
- Robust data dissemination mechanisms

Figure 2: Components of Data Governance

II. Data literacy

Data literacy is the connecting bridge between data and decision-making⁴. It is data literacy—the ability to analyse, understand and interpret data—that translates into evidence-based policy decisions. Any initiative to promote data literacy requires a combination of:

- a) Systemic and broad-based data producers-user engagements
- b) Trainings and workshops for data producers, users and policymakers
- c) Easy and affordable access to the right data
- d) Integration of data talks into social, electronic and print media
- e) Targeted sectoral policies and tools

III. Open data with no gateways

² Data governance refers to “The kind of decisions made over data, who is able to make such decisions and therefore to influence the way data is accessed, controlled, used and benefited from”. Marina Micheli, JRC project (DigiTranScope). https://www.big-data-value.eu/wp-content/uploads/2019/10/BDVE_Policy_Brief_read.pdf

³ <https://unece.org/sites/default/files/2024-04/ECECESSTAT20234.pdf>

⁴ <https://unece.org/sites/default/files/2024-04/ECECESSTAT20234.pdf>

Modern technologies and user-friendly analytics tools are essential for fostering a data culture as they enhance decision-making capabilities, accelerate the data analysis processes, and make data more accessible and impactful for everyone.

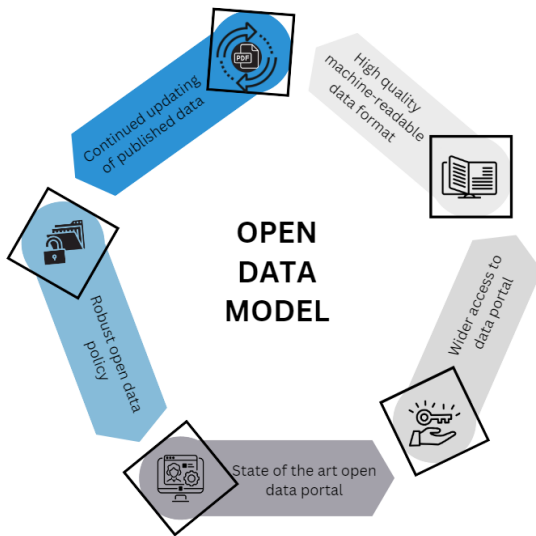


Figure 3: An open data model The diagram illustrates the key components of an open data model. It includes the development of a robust open data policy, complemented by the creation of a state-of-the-art open data portal to ensure broader access.

The model emphasises providing data in high-quality, machine-readable formats, and ensuring the continued updating of published data to maintain relevance and accuracy.

Key recommendations

To promote a strong data culture and ensure the successful implementation of the three-pronged strategy for enhanced data accessibility, the following recommendations are proposed:

1. *Development of clear, non-technical, easy-to-understand taxonomy and framework for data governance:*

A well-defined data taxonomy and governance framework is essential to foster a data culture in Pakistan. Clear legal definitions, especially concerning privacy, will encourage the sharing and integration of real-time data with national repositories like the Pakistan Bureau of Statistics (PBS).

2. *Improve data infrastructure:*

Pakistan's data landscape is hindered by limited data availability and fragmented systems. Investing in a robust data governance framework, sharing protocols, and integration of strategies is crucial for enabling data-driven development planning and decision-making.

3. *Invest in making data interoperable:*

To maximise the public value of data, it must be interoperable across departments and stakeholders. This requires innovative data-sharing tools, protection policies, and coordination mechanisms, modelled after frameworks like Italy's Data & Analytics Framework (DAF).

4. *Clearly defined protocols for using real-time data:*

The use of real-time data for policymaking is promising but poses challenges in integration, portability, and protection. Clearly defined protocols and coordination between national statistical systems and sector-specific data producers are necessary.

5. *Form data partnerships:*

Building strong partnerships between data producers and users is vital. The PBS and provincial bureaus should lead efforts to establish partnerships within the national statistical system, and with civil society, industry, and academia, focusing on real-time data sectors like health and education.

6. Map the data market:

Understanding the data market is key to fostering a data culture. Federal and provincial bureaus should assess the demand for data across various sectors and match it with supply through updated policies and innovative tools for data production and integration.

7. Including refugees in national data systems

The refugee population is often excluded or inadequately captured in national statistical systems. To bridge this gap, refugees should be included in national surveys such as the Household Integrated Economic Survey (HIES); Pakistan can learn from Kenya, Morocco, Georgia and Ethiopia. Federal and provincial bureaus must put in place robust mechanisms for coordinating with federal and provincial Commissionerate for Afghan refugees. The bureaus should publish statistical figures on refugees to enhance access to refugee data and statistics on Afghan refugees.

8. Develop and implement a legal framework for digital transformation for open data:

As modern technologies revolutionise data governance, a well-defined legal framework for digital governance is essential to navigate the opportunities and challenges of digital transformation in data management. The primary goal of this framework will be to prevent unauthorised access, breaches, or misuse of data.

9. Capacity development to present easy-to-understand data—analysis, interpretations, and visualisation:

Building capacity in data visualisation and storytelling is crucial for making data accessible to the general public. Training in software like Power BI and Tableau for mid-career officers in federal and provincial bureaus of statistics will help present data effectively in understandable formats.

10. Establishment of a National Statistical Forum:

A National Statistical Forum will unite key stakeholders to promote data-driven decision-making across sectors. It will serve as the central hub for coordinating statistical activities, enhancing data quality, and fostering a resilient, data-informed society. The PBS may serve as the secretariat for the forum including representatives from the development sector, think tanks, civil society, etc.

11. Strong political ownership essential to promote data culture:

To effectively promote a data culture, strong political ownership is essential. Leaders must prioritise data-driven decision-making and champion policies that support data governance, accessibility, and transparency. By demonstrating a commitment to these principles, political leaders can create an environment that fosters trust in data and encourages its widespread use across all sectors